Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (original) A compound of formula

or a pharmaceutical acceptable salt thereof, wherein

Ar and Ar' are independently selected from the group consisting of aryl, substituted aryl, heteroaryl and substituted heteroaryl, with the proviso that for Ar, the heteroaryl is not 2-pyridyl and substituted heteoraryl is not substituted 2-pyridyl;

R¹ is selected from the group consisting of

H;

C₁₋₁₀ alkyl;

 C_{1-10} alkyl independently substituted by up to three groups selected from aryl, heteroaryl, heterocycle, cycloalkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂, wherein the aryl, heteroaryl, heterocycle and cycloalkyl groups may each independently be substituted by up to three groups selected from NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

arvl:

aryl independently substituted by up to three groups selected from lower alkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

heteroaryl;

heteroaryl independently substituted by up to three groups selected from lower alkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

heterocycle;

heterocycle independently substituted by up to three groups selected from lower alkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

C₃₋₁₀ cycloalkyl;

C₃₋₁₀ cycloalkyl independently substituted by up to three groups selected from lower alkyl, substituted lower alkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

C₂₋₁₀ alkenyl;

 C_{2-10} alkenyl independently substituted by up to three groups selected from cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocycloalkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂:

C₂₋₁₀ alkynyl; and

 C_{2-10} alkynyl independently substituted by up to three groups selected from NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂; and wherein R⁸, R⁹ and R¹⁰ are independently H or lower alkyl; R¹¹ and R¹² are independently selected from the group consisting of

H;

unsubstituted lower alkyl;

lower alkyl substituted by hydroxy, alkoxy or NR²¹R²²;

unsubstituted cycloalkyl;

cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²²;

unsubstituted heterocycle;

heterocycle substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²²;

or alternatively NR¹¹R¹² forms a ring having 3 to 7 atoms, the ring having no or at least one additional heteroatoms, with the proviso that if the heteroatom is N, the heteroatom may be substituted by one or more substituents selected from the group consisting of lower alkyl, OR¹³, COR¹⁴, CO₂R¹⁴, CONR¹⁴R¹⁵, SO₂R¹⁴, and SO₂NR¹⁴R¹⁵;

R¹³ is selected from the group consisting of

H;

COR14:

CONR¹⁴R¹⁵:

unsubstituted lower alkyl;

lower alkyl substituted by hydroxy, alkoxy or NR²¹R²²,

unsubstituted cycloalkyl;

cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²²,

unsubstituted heterocycle; and

heterocycle substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²²;

R¹⁴ and R¹⁵ are independently selected from the group consisting of

H;

unsubstituted lower alkyl;

lower alkyl substituted by hydroxy, alkoxy or NR²¹R²²,

unsubstituted cycloalkyl;

cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²²;

unsubstituted heterocycle;

heterocycle substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²²;

or alternatively NR¹⁴R¹⁵ forms a ring having 3 to 7 atoms, the ring having no or at

least one hetero atoms, with the proviso that if the heteroatom is N, the

heteroatom may be substituted by one or more substituents selected from the

group consisting of lower alkyl, OR²³, COR²³, CO₂R²³, CONR²³R²⁴, SO₂R²³,

SO₂NR²³R²⁴;

R²¹ is selected from the group consisting of H, lower alkyl, COR²³ or CO₂R²³;

 R^{22} , R^{23} and R^{24} are independently selected from the group consisting of H or lower alkyl, or alternatively $NR^{21}R^{22}$ or $NR^{23}R^{24}$ independently forms a ring having 3 to 7 atoms, the ring having no or at least one additional heteroatoms selected from the group consisting of N, O, or S, with the proviso that if the heteroatom is N, the heteroatom may be in the form of -NH or NR^{25} , and if the hetero atom is S, it may be in the form of $S(O)_m$ where m=0, 1 or 2; and R^{25} is lower alkyl.

- 2. (original) The compound of claim 1 wherein Ar is a substituted heteroaryl, with the proviso that the substituted heteroaryl is not 2-pyridyl.
- 3. (original) The compound of claim 1 wherein Ar' is aryl, substituted aryl or heteroaryl.
- 4. (original) The compound of claim 1 wherein R¹ is aryl, substituted aryl or heteroaryl.
- 5. (currently amended) \underline{A} pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 and a pharmaceutically acceptable carrier or excipient.

Claims 6 to 8 (canceled)

9. (original) A compound of formula

or a pharmaceutically acceptable salt thereof, where R¹ is selected from the group consisting of

H;

C₁₋₁₀ alkyl;

 C_{1-10} alkyl independently substituted by up to three groups selected from aryl, heteroaryl, heterocycle, cycloalkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂, wherein the aryl, heteroaryl, heterocycle and cycloalkyl groups may each independently be substituted by up to three groups selected from NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

aryl;

aryl independently substituted by up to three groups selected from lower alkyl, NR 8 R 9 , OR 10 , SR 10 , halogen, COR 11 , CO $_2$ R 11 , CONR 11 R 12 , SO $_2$ NR 11 R 12 , SOR 11 , SO $_2$ R 11 , CN and NO $_2$;

heteroaryl;

heteroaryl independently substituted by up to three groups selected from lower alkyl, NR^8R^9 , OR^{10} , SR^{10} , halogen, COR^{11} , CO_2R^{11} , $CONR^{11}R^{12}$, $SO_2NR^{11}R^{12}$, SO_2NR^{11} , SO_2R^{11} , CN and NO_2 ;

heterocycle;

heterocycle independently substituted by up to three groups selected from lower alkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

C₃₋₁₀ cycloalkyl;

C₃₋₁₀ cycloalkyl independently substituted by up to three groups selected from lower alkyl, substituted lower alkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂;

C₂₋₁₀ alkenyl;

 C_{2-10} alkenyl independently substituted by up to three groups selected from cycloalkyl, substituted cycloalkyl, heterocyclyl, substituted heterocycloalkyl, NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂:

C₂₋₁₀ alkynyl; and

 C_{2-10} alkynyl independently substituted by up to three groups selected from NR⁸R⁹, OR¹⁰, SR¹⁰, halogen, COR¹¹, CO₂R¹¹, CONR¹¹R¹², SO₂NR¹¹R¹², SOR¹¹, SO₂R¹¹, CN and NO₂; and wherein R⁸, R⁹ and R¹⁰ are independently H or lower alkyl; R² and R³ are independently selected from the group consisting of

NR¹¹R¹²; OR¹³; SR¹⁶; halogen; COR¹⁴; CO₂R¹⁴; CONR¹⁴R¹⁵; SO₂NR¹⁴R¹⁵; SO₂R¹⁴; CN; NO₂; (CH₂)_nheterocycle; (CH₂)_nheterocycle;

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\begin{split} &C_{1}\text{-}C_{10} \text{ alkyl}; \\ &C_{3}\text{-}C_{10} \text{ cycloalkyl}; \\ &C_{2}\text{-}C_{10} \text{ alkenyl}; \\ &C_{2}\text{-}C_{10} \text{ alkynyl}; \\ &\text{where n is 0, 1, 2, or 3 and the aryl, heteroaryl, heterocycle, alkyl, cycloalkyl, alkenyl, and alkynyl groups are unsubstituted or substituted by up to three groups selected from & NR^{11}R^{12}; \\ &OR^{13}; \\ &SR^{16}; \\ &\text{halogen}; \end{split}
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 $SO_2NR^{14}R^{15}$; SO_2R^{14} ; CN; and

NO₂;

COR¹⁴;

CO₂R¹⁴;

CONR¹⁴R¹⁵;

or alternatively, R² and R³ together form a ring having 3 to 7 atoms fused to the phenyl ring that they are attached to, the ring having no or at least one additional heteroatoms, with the proviso that if the heteroatom is N, the heteroatom may be substituted by at least one substituent selected from the group consisting of

lower alkyl; lower alkyl substituted by hydroxy, alkoxy or $NR^{11}R^{12}$; $NR^{11}R^{12}$; OR^{13} ; SR^{16} ; COR^{14} ; CO_2R^{14} ; $CO_NR^{14}R^{15}$;

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Application No. 10/731,594
Filed: December 8, 2003
                    SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>;
                    SO<sub>2</sub>R<sup>14</sup>; and
                    CN;
R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and R<sup>26</sup> are independently selected from the group, with at least one
being H, consisting of
          H;
          unsubstituted lower alkyl;
          lower alkyl substituted by hydroxy, alkoxy or halogen;
          NR<sup>21</sup>R<sup>22</sup>:
          OR<sup>23</sup>:
          SR<sup>23</sup>:
          halogen;
          NO<sub>2</sub>;
          COR<sup>23</sup>:
          CO<sub>2</sub>R<sup>23</sup>;
          CONR<sup>23</sup>R<sup>24</sup>;
          SO<sub>2</sub>NR<sup>23</sup>R<sup>24</sup>;
          SO<sub>2</sub>R<sup>23</sup>; and
          CN:
R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of
          H;
          unsubstituted lower alkyl;
          lower alkyl substituted by hydroxy, alkoxy or NR<sup>21</sup>R<sup>22</sup>;
          unsubstituted cycloalkyl;
          cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR<sup>21</sup>R<sup>22</sup>;
          unsubstituted heterocycle; and
          heterocycle substituted by hydroxy, alkoxy, lower alkyl or NR<sup>21</sup>R<sup>22</sup>;
          or alternatively NR<sup>11</sup>R<sup>12</sup> forms a ring having 3 to 7 atoms, the ring having no or at
          least one additional heteroatoms, with the proviso that if the hetero atom is N, the
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heteroatom may be substituted by one or more substituents selected from the
         group consisting of lower alkyl, COR<sup>14</sup>, CO<sub>2</sub>R<sup>14</sup>, CONR<sup>14</sup>R<sup>15</sup>, SO<sub>2</sub>R<sup>14</sup>, and
         SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>;
R<sup>13</sup> is selected from the group consisting of
         H;
         COR14:
         CONR<sup>14</sup>R<sup>15</sup>:
         unsubstituted lower alkyl;
        lower alkyl substituted by hydroxy, alkoxy or NR<sup>21</sup>R<sup>22</sup>,
         unsubstituted cycloalkyl;
        cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR<sup>21</sup>R<sup>22</sup>.
         unsubstituted heterocycle; and
        heterocycle substituted by hydroxy, alkoxy, lower alkyl or NR<sup>21</sup>R<sup>22</sup>;
R<sup>14</sup> and R<sup>15</sup> are independently selected from the group consisting of
        H:
         unsubstituted lower alkyl:
        lower alkyl substituted by hydroxy, alkoxy or NR<sup>21</sup>R<sup>22</sup>:
         unsubstituted cycloalkyl;
        cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR<sup>21</sup>R<sup>22</sup>;
         unsubstituted heterocycle; and
        heterocycle substituted by hydroxy, alkoxy, lower alkyl or NR<sup>21</sup>R<sup>22</sup>,
         or alternatively NR<sup>14</sup>R<sup>15</sup> forms a ring having 3 to 7 atoms, the ring having no or at
         least one additional heteroatoms, with the proviso that if the heteroatom is N. the
         heteroatom may be substituted by one or more substituents selected from the
         group consisting of one or more lower alkyl, COR<sup>23</sup>, CO<sub>2</sub>R<sup>23</sup>, CONR<sup>23</sup>R<sup>24</sup>, SO<sub>2</sub>R<sup>23</sup>.
         SO<sub>2</sub>NR<sup>23</sup>R<sup>24</sup>:
R<sup>16</sup> is selected from the group consisting of
         unsubstituted lower alkyl;
         lower alkyl substituted by hydroxy, alkoxy or NR<sup>21</sup>R<sup>22</sup>,
         unsubstituted cycloalkyl;
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cycloalkyl substituted by hydroxy, alkoxy, lower alkyl or NR²¹R²², unsubstituted heterocycle; and

heterocycle substituted by hydroxy, alkoxy, lower alkyl or $NR^{21}R^{22}$; R^{21} is selected from the group consisting of H, lower alkyl, COR^{23} or CO_2R^{23} ; R^{22} , R^{23} and R^{24} are independently selected from the group consisting of H or lower alkyl, or alternatively $NR^{21}R^{22}$ or $NR^{23}R^{24}$ independently forms a ring having 3 to 7 atoms, the ring having no or at least one additional heteroatom selected from the group consisting of N, O, and S, with the proviso that if the heteroatom is N, the heteroatom may be in the form of -NH or NR^{25} , and if the hetero atom is S, it may be in the form of $S(O)_m$ where m=0, 1 or 2; and R^{25} is lower alkyl.

- 10. (original) The compound of claim 9 wherein R⁶ is OR²³.
- 11. (original) The compound of claim 9 wherein R⁴ and R²⁶ are halogen.
- 12. (original) The compound of claim 9 wherein R⁵ and R⁷ are OR²³.
- 13. (original) The compound of claim 9 wherein R²⁶ is an unsubstituted lower alkyl.
- 14. (original) The compound of claim 9 wherein R⁴, R⁵, R⁶ and R²⁶ are H.
- 15. (original) The compound of claim 9 wherein R⁵ and R²⁶ are OR²².
- 16. (original) The compound of claim 9 wherein R²⁶ is OR²³.
- 17. (original) The compound of claim 9 wherein R⁶ and R⁷ are OR²³.
- 18. (original) The compound of claim 9 wherein R⁶ is OR²³.

19. (original) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 9 and a pharmaceutically acceptable carrier or excipient.

Claims 20 to 22 (canceled)

- 23. (original) A compound selected from the group:
- 6-(4-Methoxy-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 1f);
- 6-(2,6-Dichloro-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 2c);
- 6-(3,5-Dimethoxy-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 3d);
- 8-Phenyl-2-phenylamino-6-O-tolyl-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 4c);
- 6,8-Diphenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 5c);
- 6-(2,5-Dimethoxy-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-
- d]pyrimidin-7-one (Example 6c); and
- 6-(2-Methoxy-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 7c).
- 24. (original) A compound selected from the group:
- 6-(3,5-Bis-trifluromethyl-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (example 8d);
- 8-Phenyl-2-phenylamino-6-pyridin-4-yl-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 9c);
- 8-Phenyl-2-phenylamino-6-pyridin-3-yl-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 10c);
- 6-(3,4-Dimethoxy-phenyl)-8-phenyl-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidin-7-one (Example 11c);

- 6-(4-Methoxy-phenyl)-2-(6-methoxy-pyridin-3-ylamino)-8-phenyl-5,8-dihydro-6H-pyrido[2,3-d]pyrimidine-7-one (Example 12d);
- 8-Isobutyl-6-(4-methoxy-phenyl)-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidine-7-one (Example 13b); and
- 8-Cyclopropylmethyl-6-(4-methoxy-phenyl)-2-phenylamino-5,8-dihydro-6H-pyrido[2,3-d]pyrimidine-7-one (Example 14b).
- 25. (original) A compound selected from the group:
- 3-(2,4-Dichloro-pyrimidin-5-yl)-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 1d);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 1e);
- 2-(2,6-Dichloro-phenyl)-3-(2,4-dichloro-pyrimidin-5-yl)-propionic acid methyl ester (Example 2a);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(2,6-Dichloro-phenyl)-propionic acid methyl ester (Example 2b);
- 3-(2,4-Dichloro-pyrimidin-5-yl)-2-(3,5-dimethoxy-phenyl)-propionic acid methyl ester (Example 3b);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(3,5-dimethoxy-phenyl)-propionic acid methyl ester (Example 3c);
- 3-(2,4-Dichloro-pyrimidin-5-yl)-2-O-tolyl-propionic acid methyl ester (Example 4a);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-O-tolyl-propionic acid methyl ester (Example 4b)
- 3-(2.4-Dichloro-pyrimidin-5-yl)-2-phenyl-propionic acid methyl ester (Example 5a); and
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-phenyl-propionic acid methyl ester (Example 5b).
- 26. (original) A compound selected from the group:
- 3-(2,4-Dichloro-pyrimidin-5-yl)-2-(2,5-dimethoxy-phenyl)-propionic acid ethyl ester (Example 6a);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(2,5-dimethoxy-phenyl propionic acid ethyl ester (Example 6b);

- 3-(2,4-Dichloro-pyrimidin-5-yl)-2-(2-methoxy-phenyl)-propionic acid methyl ester (Example 7a);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(2-methoxy-phenyl) propionic acid ethyl ester (Example 7b);
- 2-(3,5-Bis-trifluoromethyl-phenyl)-3-(2,4-dichloro-pyrimidin-5-yl)-propionic acid methyl ester (Example 8b);
- 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(3,5-bis-trifluoromethyl-phenyl)-propionic acid methyl ester (Example 8c);
 - 3-(2,4-Dichloro-pyrimidin-5-yl)-2-pyridin-4-yl-propionic acid ethyl ester (Example 9a);
 - 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-pyridin-4-yl-propionic acid ethyl ester (Example 9b);
 - 3-(2,4-Dichloro-pyrimidin-5-yl)-2-pyridin-3-yl-propionic acid ethyl ester (Example 10a); and
 - 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-pyridin-3-yl-propionic acid ethyl ester (Example 10b).
 - 27. (original) A compound selected from the group:
 - 3-(2,4-Dichloro-pyrimidin-5-yl)-2-(3,4-dimethoxy-phenyl)-propionic acid ethyl ester (Example 11a);
 - 3-(2,4-Diphenylamino-pyrimidin-5-yl)-2-(3,4-dimethoxy-phenyl)-propionic acid ethyl ester (Example 11b);
 - 3-(4-Chloro-2-phenylamino-pyrimidin-5-yl)-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 12a);
 - 3-(2-Chloro-4-phenylamino-pyrimidin-5-yl)-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 12b);
 - 3-[2-(6-Methoxy-pyridin-3-ylamino)-4-phenylamino-pyrimidin-5-yl]-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 12c);
 - 3-(2-Phenylamino-4-isobutylamino-pyrimidin-5-yl)-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 13a); and

3-(2-Phenylamino-4-cyclopropylmethylamino-pyrimidin-5-yl)-2-(4-methoxy-phenyl)-propionic acid methyl ester (Example 14a).